



## A first in Belgium:

# Elia deploys drones to install bird diverters on its high-voltage lines

Today, Elia is installing bird diverters using drones – a first in Belgium. This technique can now be applied thanks to the evolution of the European regulatory framework. The bird diverters are installed using drones specially designed to work on high-voltage lines. A total of 600 diverters will be installed this week on parts of the lines between Harmignies-Ville-sur-Haine and Harmignies-Ciply.

### A first in Belgium

- Six hundred Firefly-type diverters will be installed over five days;
- The diverters are installed every ten metres, so that a 4.6 km section of the high-voltage lines will be protected;
- Firefly diverters prevent 95% of bird collisions with high-voltage lines.

### The use of drones in the management of the electricity grid

Innovation and sustainability are important concerns within Elia. Drones have previously been used for visual inspections and audits of the lines. Amendments to relevant European regulations mean that the transmission system operator can now also use drones to install diverters. The manual installation of diverters is time consuming and not free from risks. It requires very strict safety measures to protect workers. It goes without saying that the use of drones has numerous advantages. Installing diverters with drones is not only faster, it is less risky for the workers..

Specifically, the drone pilot will stand under the line to apply the diverters. The drone is equipped with five diverters and then flies into the air. It then attaches the diverters 10 metres apart to the line. Once the five diverters are installed, the drone lands so that it can pick up new diverters and continue the installation. In this way, more than a hundred diverters can be installed per day. All this is done with a drone that has been designed for this purpose. Electromagnetic fields produced by the high-voltage lines have little impact on the drone and it is specially equipped with tools to perform the various operations. During the installation, a technician integrates the GPS data of each of the diverters on the section.



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*“With the installation of 600 diverters on a 4.6 km section, Elia is following the recommendations of the experts and the Group can avoid most bird collisions with the connection. Natagora (Wallonia) and Natuurpunt (Flanders) are providing their expertise so that Elia can meet its target of 20 km of extra lines fitted with diverters per year”.*

**Jean-Yves Paquet, Aves, Natagora Birds Working Group**

## Firefly bird diverters

Firefly-type diverters are small rectangular plates of 11 by 15 cm, which reflect light thanks to two reflectors, one on each side. This allows birds to better notice the lines and adjust their trajectory. Analyses by Natuurpunt of other lines, on which diverters were already placed using a trolley instead of drones, showed that the diverters prevented 95% of collisions (research carried out on the high-voltage line in Noordschote).

## Target: 20 km of diverters installed per year

Elia works closely with Natagora in Wallonia and Natuurpunt in Flanders to limit the impact of its infrastructure on the environment and in particular on birds. As bird experts have mapped out the collision risk for the entire Belgian high-voltage grid, Elia knows which lines pose the greatest risk to birds. Currently, 79.74 km of high-voltage lines on the territory have diverters. Elia has set itself the interim target of installing 200 km of lines with diverters by 2030 - or an extra 20 km per year - and will identify and prioritise the most important risk areas.

## Context of interventions

These bird diverters are installed as part of the works to bring the electricity zone to a voltage level of 150 kV. The transition to this voltage level will contribute to the security of supply of the province of Hainaut, which is beneficial for the ever-increasing renewable energy sources. For example, adjustments are needed to the Ciplly and Pâturages substations and to the Harmignies-Ville-sur-Haine and Harmignies-Ciplly connections (reinforcement of pylon crossarms, foundations, reinforcement of insulators, etc.). Elia takes advantage of these works to install the diverters, which can limit the number of collisions of birds with electric lines.

Some illustrations of pylons and diverters are made available to the press via the following link:

Picture link: <https://we.tl/t-JH4lHWvUr>

Video link 1 : <https://we.tl/t-1TIWdW0mIJ>

Video link 2 : <https://we.tl/t-cqzSvdXBEe>



## About Elia Group

### One of Europe's top five TSOs

Elia Group is a key player in electricity transmission. We ensure that production and consumption are balanced around the clock, supplying 30 million end users with electricity. Through our subsidiaries in Belgium (Elia) and the north and east of Germany (50Hertz), we operate 19,192 km of high-voltage connections, meaning that we are one of Europe's top 5 transmission system operators. With a reliability level of 99.99%, we provide society with a robust power grid, which is important for socioeconomic prosperity. We also aspire to be a catalyst for a successful energy transition, helping to establish a reliable, sustainable and affordable energy system.

### We are making the energy transition happen

By expanding international high-voltage connections and incorporating ever-increasing amounts of renewable energy into our grid, we are promoting both the integration of the European energy market and the decarbonisation of society. We also continuously optimise our operational systems and develop new market products so that new technologies and market parties can access our grid, thus further facilitating the energy transition..

### In the interest of society

As a key player in the energy system, Elia Group is committed to working in the interest of society. We are responding to the rapid increase in renewable energy by constantly adapting our transmission grid. We also ensure that investments are made on time and within budget, with a maximum focus on safety. In carrying out our projects, we manage stakeholders proactively by establishing two-way communication channels between all relevant parties very early on in the development process. We also offer our expertise to different players across the sector in order to build the energy system of the future.

### International focus

In addition to our activities as a transmission system operator, we provide various consulting services to international customers through our third subsidiary, Elia Grid International (EGI). Elia (in Belgium) is also part of the Nemo Link consortium, which operates the first subsea electrical interconnector between Belgium and the UK.

The legal entity Elia Group is a listed company whose core shareholder is the municipal holding company Publi-T.

More information: [eliagroup.eu](https://www.eliagroup.eu)

